

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S32	0	("ACsamebatterysame(heatingwarming)").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2004/12/20 11:32
S33	1580	AC same battery same (heating warming)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2004/12/20 12:33
S34	155	AC same battery same (heating warming) and (electric near4 motor)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2004/12/20 11:47
S35	757	219/209.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2004/12/20 11:48
S36	87	219/209.ccls. and AC	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2004/12/20 11:48
S37	80	AC same battery same (heating warming) same inverter	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2004/12/20 12:37
S38	11825	(heating warming) with AC	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2004/12/20 12:37
S39	288	(heating warming) with AC with inverter	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2004/12/20 12:39

S40	13	(heating warming) with AC with inverter and (electric adj motor)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2004/12/20 13:25
S41	9629	"429"/\$.ccls. and (heating warming)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2004/12/20 13:25
S42	1347	"429"/\$.ccls. and (heating warming) with battery	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2004/12/20 13:25
S43	76	"429"/\$.ccls. and (heating warming) same battery same AC	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2004/12/20 13:26
S44	4	"6072301"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2004/12/21 11:17
S45	7	"6078165"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2004/12/21 11:19
S46	4	"6166549"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2004/12/21 11:19
S47	6	"5990661"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2004/12/21 11:22
S48	97	"5760488" "5808469" "5824432" "5831514"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2004/12/21 11:22

SET ABB=ON PLU=ON

INDEX 'HCAPLUS, INSPEC, COMPENDEX, SCISEARCH, PASCAL, ELCOM, ENERGY, AEROSPACE, DISSABS, METADEX, ANTE, NTIS, CEABA-VTB, CONFSCI, EMA, ENTEC, FEDRIP, RDISCLOSURE, SIGLE, SOLIDSTATE, JICST-EPLUS' ENTERED AT 12:27:49 ON 21 DEC 2004

SEA AC OR A(W)C OR ALTERNATING(A) CURRENT?

225062 FILE HCAPLUS
94199 FILE INSPEC
58430 FILE COMPENDEX
86732 FILE SCISEARCH
38791 FILE PASCAL
4567 FILE ELCOM
35111 FILE ENERGY
11166 FILE AEROSPACE
8031 FILE DISSABS
10389 FILE METADEX
1680 FILE ANTE
10900 FILE NTIS
1989 FILE CEABA-VTB
1671 FILE CONFSCI
2361 FILE EMA
10787 FILE ENTEC
2265 FILE FEDRIP
879 FILE RDISCLOSURE
941 FILE SIGLE
4935 FILE SOLIDSTATE
32725 FILE JICST-EPLUS

L1

QUE AC OR A(W) C OR ALTERNATING(A) CURRENT?

SEA HEAT? OR WARM? OR THERMAL? OR TEPEFACT? OR PREHEAT? OR (HIG

3465581 FILE HCAPLUS
958563 FILE INSPEC
940629 FILE COMPENDEX
881647 FILE SCISEARCH
776482 FILE PASCAL
28747 FILE ELCOM
1075550 FILE ENERGY
357708 FILE AEROSPACE
80562 FILE DISSABS
348226 FILE METADEX
25440 FILE ANTE
270836 FILE NTIS
98877 FILE CEABA-VTB
36714 FILE CONFSCI
78396 FILE EMA
115497 FILE ENTEC
18664 FILE FEDRIP
7544 FILE RDISCLOSURE
25056 FILE SIGLE
51630 FILE SOLIDSTATE
439625 FILE JICST-EPLUS

L2

QUE HEAT? OR WARM? OR THERMAL? OR TEPEFACT? OR PREHEAT? OR (HIGH## OR HEIGHTEN? OR RAIS? OR INCREAS? OR ELEVAT?) (2A) (TEMP# OR TEMPERATUR?)

SEA BATTER? OR PILE? OR CELL OR (ELECTR? OR POWER?) (2N) SOURCE?

2633901 FILE HCAPLUS
296766 FILE INSPEC
274929 FILE COMPENDEX
2265215 FILE SCISEARCH
1132129 FILE PASCAL
17746 FILE ELCOM
306863 FILE ENERGY
81995 FILE AEROSPACE
116056 FILE DISSABS
32995 FILE METADEX
7747 FILE ANTE
97672 FILE NTIS
48911 FILE CEABA-VTB
95148 FILE CONFSCI
6746 FILE EMA
49303 FILE ENTEC
58000 FILE FEDRIP
2296 FILE RDISCLOSURE
12853 FILE SIGLE
12643 FILE SOLIDSTATE
478121 FILE JICST-EPLUS

L3 QUE BATTER? OR PILE? OR CELL OR (ELECTR? OR POWER?) (2N) SOURCE? OR
((POWER OR ENERGY?) (W) STOR?) (2A) (COMPONENT? OR DEVICE?)

SEA INVERTER? OR INVERTOR? OR INVERS? OR (CURRENT? (3A) (CONVERT?

189252 FILE HCAPLUS
166542 FILE INSPEC
101965 FILE COMPENDEX
167352 FILE SCISEARCH
176706 FILE PASCAL
7523 FILE ELCOM
44986 FILE ENERGY
35524 FILE AEROSPACE
22733 FILE DISSABS
7741 FILE METADEX
1587 FILE ANTE
18546 FILE NTIS
3114 FILE CEABA-VTB
3810 FILE CONFSCI
1976 FILE EMA
11644 FILE ENTEC
1851 FILE FEDRIP
815 FILE RDISCLOSURE
1814 FILE SIGLE
4171 FILE SOLIDSTATE
34927 FILE JICST-EPLUS

L4 QUE INVERTER? OR INVERTOR? OR INVERS? OR
(CURRENT? (3A) (CONVERT? OR CONVERSION? OR SWITCH?))

SEA INTERNAL? OR INSIDE? OR WITHIN OR WITH(W) IN

1565643 FILE HCAPLUS

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712920  FILE INSPEC
492272  FILE COMPENDEX
1078356 FILE SCISEARCH
600540  FILE PASCAL
18365   FILE ELCOM
499885  FILE ENERGY
168529  FILE AEROSPACE
270127  FILE DISSABS
86577   FILE METADEX
12905   FILE ANTE
188903  FILE NTIS
25163   FILE CEABA-VTB
11434   FILE CONFSCI
20366   FILE EMA
38761   FILE ENTEC
39025   FILE FEDRIP
9690    FILE RDISCLOSURE
15603   FILE SIGLE
16295   FILE SOLIDSTATE
212285  FILE JICST-EPLUS
L5      QUE  INTERNAL? OR INSIDE? OR WITHIN OR WITH(W) IN
-----
        SEA L2(3N)L5 AND L3 AND L2 AND L4
-----
19  FILE HCAPLUS
17  FILE INSPEC
10  FILE COMPENDEX
14  FILE SCISEARCH
6   FILE PASCAL
22  FILE ENERGY
3   FILE AEROSPACE
4   FILE DISSABS
3   FILE METADEX
4   FILE NTIS
1   FILE CEABA-VTB
5   FILE ENTEC
1   FILE FEDRIP
1   FILE RDISCLOSURE
2   FILE SOLIDSTATE
4   FILE JICST-EPLUS
L6      QUE  L2(3N) L5 AND L3 AND L2 AND L4
-----
        SEA L1 AND (L2(3N)L5) AND L3 AND L4
-----
1   FILE HCAPLUS
4   FILE INSPEC
1   FILE COMPENDEX
2   FILE SCISEARCH
1   FILE PASCAL
2   FILE ENERGY
1   FILE DISSABS
1   FILE METADEX
1   FILE ENTEC
1   FILE RDISCLOSURE
2   FILE JICST-EPLUS
L7      QUE  L1 AND (L2(3N) L5) AND L3 AND L4

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 FILE 'INSPEC, SCISEARCH, ENERGY, JICST-EPLUS, HCAPLUS, COMPENDEX, PASCAL, DISSABS, METADEX, ENTEC, RDISCLOSURE' ENTERED AT 13:22:30 ON 21 DEC 2004

L8 17 S L7
 L9 88 S L6 NOT L7
 L10 8 S L8 NOT P/DT NOT PY>1998
 L11 1 S L8 AND P/DT
 L12 5 DUP REM L10 (3 DUPLICATES REMOVED)
 ANSWERS '1-2' FROM FILE INSPEC
 ANSWER '3' FROM FILE ENERGY
 ANSWERS '4-5' FROM FILE JICST-EPLUS
 D 1-5 ALL
 D L11 ALL
 L13 495908 S BATTER? OR (ELECTR? OR POWER?) (2N) SOURCE?
 OR ((POWER OR ENERGY?) (W) STOR?) (2A) (COMPONENT? OR DEVICE?)
 L14 28 S L9 AND L13
 L15 12 S L14 NOT P/DT NOT PY>1998
 L16 4 S L14 AND P/DT
 L17 4 DUP REM L16 (0 DUPLICATES REMOVED)
 ANSWER '1' FROM FILE ENERGY
 ANSWERS '2-4' FROM FILE HCAPLUS
 D 1 ALL
 D 2-4 MAX
 L18 10 DUP REM L15 (2 DUPLICATES REMOVED)
 ANSWERS '1-2' FROM FILE INSPEC
 ANSWER '3' FROM FILE SCISEARCH
 ANSWERS '4-6' FROM FILE ENERGY
 ANSWER '7' FROM FILE JICST-EPLUS
 ANSWERS '8-9' FROM FILE COMPENDEX
 ANSWER '10' FROM FILE DISSABS
 D 1-10 ALL

INDEX 'WPIX, JAPIO, JICST-EPLUS, PATOSEP, PATOSWO, PATDPAFULL, EUROPATFULL, PCTFULL, FRFULL' ENTERED AT 14:20:03 ON 21 DEC 2004

SEA L1(10N) (L2(3N) L5) (10N) L3(10N) L4

 33 FILE EUROPATFULL
 213 FILE PCTFULL
 L19 QUE L1(10N) (L2(3N) L5) (10N) L3(10N) L4

FILE 'PCTFULL, EUROPATFULL' ENTERED AT 14:36:43 ON 21 DEC 2004

L20 803 S L19
 L21 308 S (S FEEDBACK? OR FEED(W) BACK OR LOOP) (2A) L13
 L22 4 S L1(5N) (L2(2N) L5) (5N) L3(5N) L4 AND L21
 L23 4 DUP REM L22 (0 DUPLICATES REMOVED)
 ANSWERS '1-2' FROM FILE PCTFULL
 ANSWERS '3-4' FROM FILE EUROPATFULL
 D 1-4 BIB AB KWIC
 D 1-4 HIT

L12 ANSWER 1 OF 5 INSPEC (C) 2004 IEE on STN DUPLICATE 1
AN 1997:5628752 INSPEC DN B9708-8250-008; C9708-3340H-080 Full-text
TI A photovoltaic solar water heating system.
AU Fanny, A.H.; Dougherty, B.P. (Building Environ. Div., Nat. Inst. of
Stand. & Technol., Gaithersburg, MD, USA)
SO Transactions of the ASME. Journal of Solar Energy Engineering (May 1997)
vol.119, no.2, p.126-33. 14 refs.
Published by: ASME
Price: CCCC 0199-6231/97/\$3.00
CODEN: JSEEDO ISSN: 0199-6231
SICI: 0199-6231(199705)119:2L:126:PSWH;1-1
DT Journal
TC New Development; Practical
CY United States
LA English
AB A novel solar water heating system was patented in 1994. This system uses
photovoltaic **cells** to generate electrical energy that is subsequently dissipated
in multiple electric resistive heating elements. A microprocessor controller
continually selects the appropriate heating elements such that the resistive load
causes the photovoltaic array to operate at or near maximum power. Unlike other
residential photovoltaic power systems, the photovoltaic solar water heating
system does not require an **inverter** to **convert** the direct **current** supplied by the
photovoltaic array to an **alternating current** or a **battery** system for storage. It
uses the direct current supplied by the photovoltaic array and the inherent
storage capabilities of a residential water heater. A photovoltaic solar hot
water system eliminates the components most often associated with the failures of
solar thermal hot water systems. Although currently more expensive than a solar
thermal hot water system, the continued decline of photovoltaic **cell** prices is
likely to make this system competitive with solar **thermal** hot water systems
within the next decade. This paper describes the system, discusses the advantages
and disadvantages relative to solar thermal water heating systems, reviews the
various control strategies which have been considered and presents experimental
results for two full-scale prototype systems.
CC B8250 Solar power stations and photovoltaic power systems; B8540 Electric
heating; B8420 Solar cells and arrays; B8110B Power system management,
operation and economics; C3340H Control of electric power systems; C3340B
Control of heat systems; C7410B Power engineering computing; C7420 Control
engineering computing
CT ELECTRIC HEATING; HEATING ELEMENTS; MICROCOMPUTER APPLICATIONS;
PHOTOVOLTAIC POWER SYSTEMS; POWER SYSTEM CONTROL; SOLAR **CELL**
ARRAYS
ST photovoltaic solar water heating system; **photovoltaic cells**;
microprocessor controller; multiple electric resistive heating elements;
photovoltaic array; direct current; residential water heater; advantages;
disadvantages; control strategies; performance tests

L12 ANSWER 2 OF 5 INSPEC (C) 2004 IEE on STN
AN 1996:5334499 INSPEC DN B9609-8360-026 Full-text
TI A new approach to the UPS concept.
AU Hoonsbeen, G.A.
SO Official Proceedings of the Eighth International Power Quality Solutions
'95. Presented at Powersystems World '95 Conference and Exhibit
Ventura, CA, USA: Intertec Int, 1995. p.15-20 of vii+383 pp. 0 refs.
Conference: Long Beach, CA, USA, 9-15 Sept 1995
ISBN: 0-931033-58-6
DT Conference Article

TC Practical
CY United States
LA English
AB Low cost uninterruptible power supplies have found many applications for safeguarding the functions of critical equipment during short term energy interruptions. However, there is growing interest in systems that provide longer run times. Conventional wisdom would be to use additional UPS **batteries** to extend run times. This choice is expensive and generally **batteries** need to be replaced every three to five years. In addition, traditional DC to **AC inverters**, embedded in most UPS systems, may perform well for five to ten minutes, but are not capable of extended run times at rated loads. **Inverters** which carry continuous loads of 1000 or more watts, for several hours, require larger components and a means for dealing with the accumulation of significant **heat within** the system's package. Here, the author describes how, in order to provide an integrated long run time uninterruptible energy system (UES), it is necessary to combine conventional techniques as well as introduce new ideas to meet some specific design goals for both existing and future market requirements.

CC B8360 Power convertors and power supplies to apparatus; B1210 Power electronics, supply and supervisory circuits; B8410E Secondary cells
CT DC-**AC** POWER CONVERTORS; DESIGN ENGINEERING; **INVERTORS**; MARKETING; SECONDARY **CELLS**; UNINTERRUPTIBLE POWER SUPPLIES
ST UPS; uninterruptible power supplies; short term energy interruptions; run times; **secondary batteries**; **inverters**; continuous loads; design goals; market requirements

L12 ANSWER 3 OF 5 ENERGY COPYRIGHT 2004 USDOE/IEA-ETDE on STN
AN 1997(6):33342 ENERGY Full-text
TI A photovoltaic solar water heating system.
AU Fanney, A.H.; Dougherty, B.P. (National Inst. of Standards and Technology, Gaithersburg, MD (United States))
CS Funding Organisation: National Inst. of Standards and Technology, Gaithersburg, MD (United States) (9525237)
NR CONF-9603117--
SO Solar engineering 1996.
Editor(s): Davidson, J.H. (Univ. of Minnesota, Minneapolis, MN (United States)); Chavez, J. (Sandia National Labs., Albuquerque, NM (United States))
New York, NY: American Society of Mechanical Engineers. 1996. p. 9-18 of 544 p. American Society of Mechanical Engineers, United Engineering Center, 345 East 47th Street, New York, NY 10017 (United States) \$65.00. Conference: 1996 American Society of Mechanical Engineers international solar energy conference, San Antonio, TX (United States), 31 Mar - 3 Apr 1996
ISBN: 0-7918-1765-2

DT Book Article; Conference; Numerical Data
CY United States
LA English
FA AB
AB A novel solar water heating system was patented in 1994. This system uses photovoltaic cells to generate electrical energy that is subsequently dissipated in multiple electric resistive heating elements. A microprocessor controller continually selects the appropriate heating elements such that the resistive load causes the photovoltaic array to operate at or near maximum power. Unlike other residential photovoltaic systems, the photovoltaic solar water heating system does not require an inverter to convert the direct current supplied by the photovoltaic array to an alternating current or a battery system for

storage. It uses the direct current supplied by the photovoltaic array and the inherent storage capabilities of a residential water heater. A photovoltaic solar hot water system eliminates the components most often associated with the failures of solar thermal hot water systems. Although currently more expensive than a solar thermal hot water system, the continued decline of photovoltaic cell prices is likely to make this system competitive with solar thermal hot water systems within the next decade. This paper describes the system, discusses the advantages and disadvantages relative to solar thermal water heating systems, reviews the various control strategies which have been considered, and presents experimental results for two full-scale prototype systems

CC *140907; 140501

CT COMPUTERIZED CONTROL SYSTEMS; COST; DESIGN; DIRECT CURRENT; ELECTRIC CURRENTS; EXPERIMENTAL DATA; FIELD TESTS; PERFORMANCE; PHOTOVOLTAIC CELLS; RESISTANCE HEATING; SOLAR WATER HEATERS; SPECIFICATIONS
*SOLAR WATER HEATERS; *PHOTOVOLTAIC CELLS

BT APPLIANCES; CONTROL SYSTEMS; CURRENTS; DATA; DIRECT ENERGY CONVERTERS; ELECTRIC CURRENTS; ELECTRIC HEATING; EQUIPMENT; HEATERS; HEATING; INFORMATION; NUMERICAL DATA; ON-LINE CONTROL SYSTEMS; ON-LINE SYSTEMS; PHOTOELECTRIC CELLS; SOLAR EQUIPMENT; TESTING; WATER HEATERS

L12 ANSWER 4 OF 5 JICST-EPlus COPYRIGHT 2004 JST on STN

AN 970147743 JICST-EPlus Full-text

TI Small Size **AC** Adapter.

AU HARA SHIN'ICHI; IGARI HITOSHI

CS Sanken Electr. Co., Ltd.

SO Sanken Giho (Sanken Technical Report), (1996) vol. 28, no. 1, pp. 42-48.

Journal Code: S0481A (Fig. 15, Tbl. 2, Ref. 1)

CODEN: STEQDU; ISSN: 0285-9815

CY Japan

DT Journal; Commentary

LA Japanese

STA New

AB The **AC** adapter which is used for the note book type PC etc., is generally required to be not only compact in size, but also fit for worldwide input voltages for use both in Japan and overseas countries. In order to design the small size **AC** adapter, the efficiency must be improved to limit **heat** caused by **internal** loss. However, it has become difficult to improve the conversion efficiency for worldwide input voltages in the conventional flyback converter system using PWM system. This paper presents the **AC** adapter the size of which is reduced to around 150cc and is applicable for the worldwide input voltages by realizing the high efficiency with the use of the **current** resonant type **converter** for the main converter circuit, complying with the requirement of safety regulations of each country and also EMI regulations. Two types of such an adapter (35W and 40W) have been developed as reported in this paper. (author abst.)

CC NC05060Q (621,311.6)

CT miniaturization; DC **power source**; **AC-DC** conversion; adapter; circuit design; efficiency; noise characteristic; switching regulator; DC-DC conversion; power converter

BT modification; **electric power source** equipment; equipment; electric conversion; transformation and conversion; design; characteristic; stabilized **power source**; electric converter; converter

L12 ANSWER 5 OF 5 JICST-EPlus COPYRIGHT 2004 JST on STN

AN 940983754 JICST-EPlus Full-text

TI Special issue : Solar houses.Outline of solar houses authorized as good energy saving building technique.Minami Fuji Industry Co., Ltd.EM house.

AU ITO HIROKAZU

CS Minamifujisangyo

SO IBEC (Inst Build Energy Conserv), (1994) vol. 15, no. 4, pp. 64-65.
Journal Code: G0755B (Fig. 6)
ISSN: 0389-2638

CY Japan

DT Journal; Commentary

LA Japanese

STA New

AB An octagonal house characterized by a hipped roof incorporated with photovoltaic power generation system is introduced.Electricity generated from solar **cells** mounted on 3 faces of the octagonal roof is **converted** to **alternating current** by an enverter to operate a heat pump type heating and cooling system with hot-water supply device.Attic space and spaces under the floors are communicated with a vent layer in the external wall and the indoor center duct so that **heat** transfer between the **inside** and outside of the house is reduced by air circulation in winter and incoming outer air from the ventilating openings under the floor and exhaust from the top of the hipped roof.

CC RB050100 (721)

CT solar house; solar system(engineering); solar photovoltaic generation; energy saving; hot water supplying apparatus; ventilation; ventilation(air conditioning)

BT dwelling house; system; power generation; electric power energy operation; saving; water supply service; building equipment; facility

L11 ANSWER 1 OF 1 RDISCLOSURE COPYRIGHT 2004 KENNETH MASON PUBL. on STN
AN 134062 RDISCLOSURE Full-text
TI Self regulating heaters
PA British Gas Corporation, Patent Department, 326 High Holborn, London, WC1V
7PT
PI RD 134062
PRAI RD1975-134062 19750520
SO Research Disclosure, 1975 06, 134
CODEN: RSDSBB; ISSN: 0374-4353
DT **Patent**

L17 ANSWER 1 OF 4 ENERGY COPYRIGHT 2004 USDOE/IEA-ETDE on STN
 AN 1983(18):160418 ENERGY Full-text
 TI Device for suppressing the ignition spark noise in a spark ignition system for a heat engine, particularly an internal combustion engine, and noise suppressing capacitor for such a system.
 AU Kasuya, H.; Sone, M.; Endo, H.; Imai, I. [Japan]
 CS Assignee(s): Nissan Motor Co. Ltd., Yokohama (Japan)
 PI DE 3221886 A 10 Jun 1981
 16 p. Availability: Deutsches Patentamt, Muenchen, Germany, F.R. JP PAT-APPL-P56-88006.
 DT Patent
 CY Germany, Federal Republic of
 LA German
 AB The suppression of high frequency interference radiated from an ignition system can be done by preventing that the current producing the noise is taken as leakage current to an ignition switch, and that the earthing of the current producing the noise is guaranteed. The length of a current by-pass circuit with a noise suppression capacitor is therefore reduced, so that there is a low impedance in comparison with the impedance of the wiring, which connects the ignition coil with the ignition switch and the vehicle battery. The capacitor is connected in a current circuit, which connects the ignition coil and the ignition switch, so that the current producing the noise always flows through this part and therefore guarantees its earthing.
 IC F02P003-02
 CC *330100
 CT *IGNITION SYSTEMS; *NOISE POLLUTION ABATEMENT; *IGNITION SYSTEMS; *RADIO NOISE; CAPACITORS; ELECTRIC COILS; IGNITION; INTERNAL COMBUSTION ENGINES; SHORT WAVE RADIATION
 BT ELECTRICAL EQUIPMENT; ELECTROMAGNETIC RADIATION; ENGINES; EQUIPMENT; HEAT ENGINES; NOISE; POLLUTION ABATEMENT; RADIATIONS; RADIOWAVE RADIATION

L17 ANSWER 2 OF 4 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 2004:466897 HCAPLUS Full-text
 DN 141:25422
 ED Entered STN: 10 Jun 2004
 TI **Heat**-radiating apparatus
 IN Matsubara, Koji; Yanatori, Michio; Yokomura, Shunichi
 PA Niigata Tlo Corporation, Japan; Kitamura Seisakusho K. K.
 SO Jpn. Kokai Tokkyo Koho, 8 pp.
 CODEN: JKXXAF

DT **Patent**
 LA Japanese
 IC ICM F25D009-00
 ICS F28D015-02; F28D015-06; H05K007-20
 CC 47-4 (Apparatus and Plant Equipment)
 Section cross-reference(s): 76

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	JP 2004163033	A2	20040610	JP 2002-330841	20021114
				JP 2002-330841	20021114

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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JP 2004163033 ICM F25D009-00
ICS F28D015-02; F28D015-06; H05K007-20

JP 2004163033 FTERM 3L044/AA01; 3L044/AA03; 3L044/BA06; 3L044/CA13;
3L044/DB02; 3L044/FA10; 3L044/HA01; 3L044/HA04;
3L044/JA01; 3L044/KA04; 3L044/KA05; 3L044/KA06;
5E322/BB06; 5E322/CA06; 5E322/DB01; 5E322/DB06;
5E322/EA02; 5E322/EA04; 5E322/FA01

AB The title apparatus includes a casing, a **heat** source arranged in the casing, and a **heat** flow controllable **heat** transfer device formed from an evaporator, a condenser, a vapor migrating pipe and a liquid returning pipe connected between the evaporator and the condenser to form a circulation path, an **inverse** U-shaped riser pipe served as a part of the liquid returning pipe at the outside of a casing, an evaporable liquid (i.e., working fluid) sealed in the circulation path and a **heater** arranged at the root section of the riser pipe, the evaporator of the **heat** flow controllable **heat** transfer device is mounted in the casing, e.g., arranged on the inner wall of the casing, in the inner atmospheric of the casing or in the vicinity of the **heat** source, and the condenser is mounted at the outside of the casing, e.g., arranged on a sunshade plate or in the gap section between the sunshade plate and the outer wall of the casing. The apparatus can be used for radiating **heat** from **inside** of an outdoor casing having **power source** and computing device installed therein.

ST **heat** radiating app cooling **inside** outdoor casing

IT Containers
(casing; **heat**-radiating apparatus with **heat** flow controllable **heat** transfer device for cooling inside of outdoor casing)

IT Computers
(cooling of; **heat**-radiating apparatus with **heat** flow controllable **heat** transfer device for cooling inside of outdoor casing)

IT Condensers
Evaporators
Heat transfer
Radiators
Refrigerants
(**heat**-radiating apparatus with **heat** flow controllable **heat** transfer device for cooling inside of outdoor casing)

IT **Heat** pipes
(loop; **heat**-radiating apparatus with **heat** flow controllable **heat** transfer device for cooling inside of outdoor casing)

IT Cooling
(of **inside** of casing; **heat**-radiating apparatus with **heat** flow controllable **heat** transfer device for cooling inside of outdoor casing)

IT **Electric** energy
(**source**, cooling of; **heat**-radiating apparatus with **heat** flow controllable **heat** transfer device for cooling inside of outdoor casing)

IT Plates
(sunshade; **heat**-radiating apparatus with **heat** flow controllable **heat** transfer device for cooling inside of outdoor casing)

IT Pipes and Tubes
(vapor migrating and liquid returning; **heat**-radiating apparatus with

heat flow controllable **heat** transfer device for
cooling inside of outdoor casing)

L17 ANSWER 3 OF 4 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:564763 HCAPLUS Full-text
ED Entered STN: 03 Aug 2001
TI Solar photoelectric generation device. [Machine Translation].
IN Matsukawa, Mitsuru; Shimomura, Yukio; Sakae, Norio
PA Nissin Electric Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DT **Patent**
LA Japanese
IC ICM H02J007-35
ICS H01L031-04; H02J003-38

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001211565	A2	20010803	JP 2000-14528	20000124
				JP 2000-14528	20000124

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2001211565	ICM	H02J007-35
	ICS	H01L031-04; H02J003-38

AB [Machine Translation of Descriptors]. Utilizing the direct current output of the solar array effectively without using systematic **power source**, try to be able to **heat** the circuit **inside** the board economically. When being below start temperature of **heating** where inspection temperature is set inside electrical transformation board 4, outputs the on directive, when rising in the **heating** stop temperature whose inspection **temperature** is **higher** than **heating** start temperature, closing dispatch control **switch** direct **current** output of 19 of the normal opening which is formed and solar array 3 through switch 19, with the temperature sensor 21 which stops the output of the on directive and on order provides with the **heater** 20 which the electric supply is done.

L17 ANSWER 4 OF 4 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1997:735823 HCAPLUS Full-text
DN 128:26720
ED Entered STN: 22 Nov 1997
TI Plasma oscillator water **heater**/steam boiler
IN Lopresti, Daniel R.
PA USA
SO U.S., 11 pp.
CODEN: USXXAM
DT **Patent**
LA English
IC ICM B23K010-00
NCL 219121590
CC 61-7 (Water)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5685997	A	19971111	US 1994-337767	19941114
				US 1994-337767	19941114

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 5685997	ICM	B23K010-00
	NCL	219121590

AB A plasma oscillator photonic energy water **heater**/steam boiler, establishes, amplifies and stores photonic energy in a plasma wherein resonance and temporary energy storage is maintained until energy is transferred on demand by **thermal** radiation and conduction of mol. kinetic energy to a **heat** exchanger having water to be **heated** therein. The chamber is a closed hollow internally reflective mirrored cylinder which includes parallel and optically resonant mirrored surfaces for sustaining a plasma oscillation within the container. A containerized mol. gas media is flooded with broad band electromagnetic radiation to create population **inversions** at the electron level in the gaseous atmospheric, and hence, store photonic energy in the plasma oscillator. Water in a **heat** exchanger immersed **within** the plasma is **heated** by **thermal** radiation energy transfer, and by conduction from a high mol. kinetic energy stored within the plasma.

ST plasma oscillator water **heater** steam boiler; **energy storage device** water **heater**

IT **Energy storage**
(plasma oscillator **device**; plasma oscillator water **heater**/steam boiler)

IT **Heat exchangers**
Heaters
Waters
(plasma oscillator water **heater**/steam boiler)

IT Boilers
(stream; plasma oscillator water **heater**/steam boiler)

DUPLICATE IS NOT AVAILABLE IN 'RDISCLOSURE'.

ANSWERS FROM THESE FILES WILL BE CONSIDERED UNIQUE
PROCESSING COMPLETED FOR L15

L18 10 DUP REM L15 (2 DUPLICATES REMOVED)
ANSWERS '1-2' FROM FILE INSPEC
ANSWER '3' FROM FILE SCISEARCH
ANSWERS '4-6' FROM FILE ENERGY
ANSWER '7' FROM FILE JICST-EPLUS
ANSWERS '8-9' FROM FILE COMPENDEX
ANSWER '10' FROM FILE DISSABS

=> d 1-10 all

L18 ANSWER 1 OF 10 INSPEC (C) 2004 IEE on STN DUPLICATE 2
AN 1984:2192677 INSPEC DN B84012701 Full-text
TI Fast NiCd charger.
AU Lambley, R.
SO Electronics & Wireless World (Nov. 1983) vol.89, no.1574, p.26-9. 0 refs.
CODEN: EWWOEG ISSN: 0266-3244
DT Journal
TC Application; Practical
CY United Kingdom
LA English

- AB The charger described is capable of charging all common **cell** types in an hour, and has a single switch to accommodate **batteries** of different sizes. A complete circuit of the charger is shown. To keep **heat** dissipation **within** manageable limits, a **switch-mode current** source is used to supply the charging current. The unit requires a power supply capable of delivering 5 A DC continuously at up to 30 V. The mains unit incorporates a toroidal transformer with two 18 V 3.3 A secondary windings. A suppression filter should be used at the mains input.
- CC B8360 Power convertors and power supplies to apparatus
- CT **BATTERY** CHARGERS; CADMIUM; NICKEL
- ST mains power supply; NiCd charger; **batteries**; **switch-mode current source**; toroidal transformer; suppression filter
- ET Cd*Ni; Cd sy 2; sy 2; Ni sy 2; NiCd; Ni cp; cp; Cd cp
- L18 ANSWER 2 OF 10 INSPEC (C) 2004 IEE on STN
- AN 1983:2079876 INSPEC DN B83040395 Full-text
- TI A CMOS SLIC with an automatic balancing hybrid.
- AU Shirasu, H.; Shibukawa, M.; Amada, E.; Hasegawa, Y. (Hitachi Central Res. Lab., Tokyo, Japan); Fujii, F.; Yasunari, K.
- SO 1983 IEEE International Solid-State Circuits Conference. Digest of Technical Papers
Editor(s): Winner, L.
New York, NY, USA: IEEE, 1983. p.18-19 of 339 pp. 3 refs.
Conference: New York, NY, USA, 23-25 Feb 1983
Price: CCCC 0193-6530/83/0000-0018\$01.00
- DT Conference Article
- TC Application; New Development; Practical
- CY United States
- LA English
- AB Many costly functions needed in the line circuits of digital switching systems can be neatly implemented with **current** CMOS **switched** capacitor technology. Meanwhile, foreign voltages, especially those due to power-line crossing and **heat**-dissipation problems **within** the **battery** feed circuit, still seem to prevent complete monolithic realization of an SLIC for full compliance of requirements. The authors present a design centered on the integration of as many functions as possible on a 5- mu CMOS device, and adapting the line circuit to severe environments and its floating characteristics, even though some external components may be needed. Another important reason for the use of low-voltage CMOS technology was the future possibility of integrating those functions into a CMOS CODEC. The hybrid circuit has an automatic balancing facility to improve return loss against varying subscriber line impedances.
- CC B2570D CMOS integrated circuits; B6230 Switching centres and equipment
- CT FIELD EFFECT INTEGRATED CIRCUITS; SWITCHED CAPACITOR NETWORKS; TELEPHONE EQUIPMENT; TELEPHONE EXCHANGES
- ST line circuits; digital switching systems; CMOS switched capacitor technology; severe environments; floating characteristics; low-voltage CMOS technology; automatic balancing facility; return loss; subscriber line impedances
- L18 ANSWER 3 OF 10 SCISEARCH COPYRIGHT (c) 2004 The Thomson Corporation. on STN
DUPLICATE 1
- AN 92:26980 SCISEARCH Full-text
- GA The Genuine Article (R) Number: GX670
- TI MATHEMATICAL SIMULATION OF THE **THERMAL** REGIMES OF LITHIUM **BATTERIES** AT HIGH DISCHARGE RATES
- AU MININ V I (Reprint); PANICHKIN V I
- SO SOVIET ELECTROCHEMISTRY, (APR 1991) Vol. 27, No. 4, pp. 456-462.

ISSN: 0038-5387.

DT Article; Journal

FS PHYS

LA ENGLISH

REC Reference Count: 13

AB The one-dimensional version of a phenomenological model of lithium **battery** discharge was formulated. The temperature dependence of specific resistance of the electrolyte in the porous cathode which is contained in the model was found by solving the **inverse** problem using the data from experiments involving individual **cells** or **batteries**. With the information obtained from individual **cells**, the direct problem can be solved, i.e., the **cell** 's discharge curve and **internal thermal** regime can be found numerically. Via experiments involving **batteries**, the analogous problem can be solved for the **batteries**.

CC ELECTROCHEMISTRY

STP KeyWords Plus (R): MODEL

RE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	ARN PG (RPG)	Referenced Work (RWK)
ALIFANOV O M	1988			INVERSE HEAT EXCHANG
BAGOTSKII V S	1988			FUNDAMENTALS ELECTRO
BLEKMAN I I	1983		328	MECHANICS APPLIED MA
CHO Y I	1987 21		183	J POWER SOURCES
CHUYAN R K	1988			METHODS MATH SIMULAT
EVANS T I	1989 136		328	J ELECTROCHEM SOC
EVANS T I	1989 136		2145	J ELECTROCHEM SOC
FRANKKAMENETSKI.DA	1969			DIFFUSION HEAT TRANS
KUTEPOV A M	1986			HYDRODYNAMICS HEAT E
MOZALEVSKAYA V P	1988 22		1	ELEKTROTEKH PROMST S
PASKONOV V M	1984			NUMERICAL SIMULATION
POLYAEV V M	1988			HYDRODYNAMICS HEAT E
SZPAK S	1987 32		239	ELECTROCHIM ACTA

L18 ANSWER 4 OF 10 ENERGY COPYRIGHT 2004 USDOE/IEA-ETDE on STN

AN 1993(21):133725 ENERGY Full-text

TI Inhomogeneous temperature problems inside a Li/SOCl₂ cell -
Homogenization by integrated heat pipes.

AU Lefriec, C.; Suleiman, A.; Alexandre, A.

NR CONF-920738--; SAE-Paper--921165

SO Warrendale, PA: Society of Automotive Engineers. 1992. 7 p. Society of
Automotive Engineers (SAE), 400 Commonwealth Dr., Warrendale, PA
15096-0001.

Conference: 22. international conference on environmental systems,
Seattle, WA (United States), 13-16 Jul 1992

DT Miscellaneous; Conference; Availability Note

CY United States

LA English

FA AB

AB The effect of the temperature gradient on the electrical capacity of the lithium/thionyl chloride (Li/SOCl₂) cells and the dependence of internal heat generation on the temperature level were investigated by studying the thermal behavior of a cell constituted by a number of couples stacked in a stainless steel cylinder during a discharge profile. It is shown that the temperature gradient between couples affected the depth of discharge, indicating that this gradient must be limited to prevent discrepancy in couple's voltage and inversion phenomenon. It was found that a cooling concept based on integrated

heat pipes is effective in reducing the temperature gradient and in yielding homogeneous cell behavior in overdischarge. 6 refs.

CC *250902

CT CAPACITY; CHLORIDES; HEAT GAIN; HEAT PIPES; LITHIUM-SULFUR BATTERIES; TEMPERATURE DEPENDENCE; TEMPERATURE GRADIENTS

*LITHIUM-SULFUR BATTERIES: *TEMPERATURE DEPENDENCE

BT CHLORINE COMPOUNDS; ELECTRIC BATTERIES; ELECTROCHEMICAL CELLS; HALIDES; HALOGEN COMPOUNDS; METAL-NONMETAL BATTERIES

ET Li; Cl*O*S; SOCl; S cp; cp; O cp; Cl cp

L18 ANSWER 5 OF 10 ENERGY COPYRIGHT 2004 USDOE/IEA-ETDE on STN

AN 1988(12):92946 ENERGY

TI Fine particles measurement techniques. Application to some atmospheric phenomena.
Techniques de mesure de l'aerosol fin. Applications a divers phenomenes atmospheriques.

AU Metayer, Y. [France]

CS CEA Centre d'Etudes Nucleaires de Fontenay-aux-Roses, 92 (France). Dept. de Protection Technique; Paris-12 Univ., 94 - Creteil (France) (9100947; 9100349)

NR CEA-R--5417; DE88753477

Oct 1987. 245 p. Availability: NTIS (US Sales Only), PC A11/MF A01.

DT Report

CY France

LA French

DN ERA-13:031022

AB A continous flow condensation nuclei counter (CNC) was first studied, this device being used for counting submicronic aerosol particles. A model describing heat and mass transfers inside a cooled pipe and the simultaneous condensational growth was developed; a comparison with experimental results showed excellent agreement. This model accounts for the defaults already observed with this type of apparatus. A new method for measuring the size distribution of aerosols with diameter ranging from 0.008 to 0.3 micron m is described. This technique is based upon particles bipolar charging, by contact with ions emitted from a beta source, and a subsequent differential electrical mobility analysis. The selected particles are detected by means of the CNC. A numerical inversion procedure is needed to recover the original aerosol size distribution. This method was compared with those currently in use: Electrical Mobility Analyser and Diffusion Battery.

CC *500200

CT *AEROSOLS: *PARTICLE SIZE; AIR POLLUTION; CONDENSATION NUCLEI; ELECTRIC MEASURING INSTRUMENTS; MEASURING METHODS; PHOTOLYSIS; RADIOLYSIS; RADON 222; STRATOSPHERE; VOLCANOES

BT ALPHA DECAY RADIOISOTOPES; CHEMICAL RADIATION EFFECTS; CHEMICAL REACTIONS; CHEMISTRY; COLLOIDS; DAYS LIVING RADIOISOTOPES; DECOMPOSITION; DISPERSIONS; EARTH ATMOSPHERE; ELECTRICAL EQUIPMENT; EQUIPMENT; EVEN-EVEN NUCLEI; HEAVY NUCLEI; ISOTOPES; MEASURING INSTRUMENTS; NUCLEI; PHOTOCHEMICAL REACTIONS; POLLUTION; RADIATION CHEMISTRY; RADIATION EFFECTS; RADIOISOTOPES; RADON ISOTOPES; SIZE; SOLS

L18 ANSWER 6 OF 10 ENERGY COPYRIGHT 2004 USDOE/IEA-ETDE on STN

AN 1986(15):120417 ENERGY Full-text

TI Direct optical pumping of high-pressure CO2 and N2O lasers with a pulsed HF laser.

AU Stenersen, K.; Wang, G. (Norwegian Defence Research Establishment, P.O. Box 25, N-2007 Kjeller) [Norway]

NR CONF-850558--
SO Digest of technical papers from the OSA/IEEE 1985 conference on lasers and electro-optics.
Washington, DC: Optical Society of America. 1985. pp. 294
Conference: Conference on lasers and electro-optics, Baltimore, MD, USA, 21 May 1985
DT Book Article; Conference
CY United States
LA English
AB A pulsed line-tunable HF laser has been used for direct optical pumping of sealed-off CO₂ and N₂O lasers at gas pressures required for continuous tuning of the laser frequency between the line centers in these gases. This pumping scheme represents a significant simplification compared with a scheme previously studied by us. In that work a DF laser was used for pumping, and DF was added as an absorber/transfer gas to a high-pressure CO₂-He gas mixture. The HF laser is a very powerful pump source which appears more attractive for practical applications than the pump sources (HBr lasers and frequency-doubled CO₂ lasers) used in previously reported optical pumping schemes for high-pressure molecular lasers. In this work CO₂ and N₂O are excited directly by HF laser radiation in the 2.7-2.9- μ m range to the (101 021)I,II and (101) vibrational levels, respectively. Population inversion is obtained via rapid decay of the lower laser levels. For the gas mixtures used in the experiments, 1-atm CO₂-9-atm He and 1-atm N₂O-4-atm He, an internal thermal equilibrium between the nu₁ and nu₂ vibrational modes is established on a 1-nsec time scale followed by a vibrational \rightarrow translational/rotational energy transfer on a 50-nsec time scale. For comparison, the decay time of the upper laser level is in the 1-2-musec range. Pump radiation absorption lengths are a few centimeters.
CC *420300
CT *CARBON DIOXIDE LASERS: *OPTICAL PUMPING; *GAS LASERS: *OPTICAL PUMPING; CHEMICAL REACTION KINETICS; GAIN; NITROUS OXIDE; OPTICAL MODES; POPULATION INVERSION; POWER LOSSES; PULSE RISE TIME; QUANTUM EFFICIENCY; VIBRATIONAL STATES
BT AMPLIFICATION; CHALCOGENIDES; EFFICIENCY; ENERGY LEVELS; ENERGY LOSSES; EXCITED STATES; GAS LASERS; KINETICS; LASERS; LOSSES; NITROGEN COMPOUNDS; NITROGEN OXIDES; OSCILLATION MODES; OXIDES; OXYGEN COMPOUNDS; PUMPING; REACTION KINETICS; TIMING PROPERTIES
ET C*O; CO₂; C cp; cp; O cp; N*O; N₂O; N cp; F*H; HF; H cp; F cp; In; D*F; DF; D cp; C*He*O; CO₂-He; Br*H; HBr; Br cp; He
L18 ANSWER 7 OF 10 JICST-EPlus COPYRIGHT 2004 JST on STN
AN 950566947 JICST-EPlus Full-text
TI Main Research Activities at the Institute of Energy Process Engineering Research Centre Juelich Germany.
AU ACHENBACH E
CS Japan Atomic Energy Res. Inst., Ibaraki-ken
SO Nippon Genshiryoku Kenkyujo JAERI, Review, (1995) pp. 100P. Journal Code: L2149A (Fig. 63, Ref. 14)
Report No.: JAERI-REVIEW-95-8
CY Japan
DT Report; Commentary
LA English
STA New
AB This report summarizes four lectures been held during the author's seven-week stay at the Department of **High Temperature Engineering** in the period from February 2nd to March 23rd in 1995 under the JAERI foreign researcher inviting program. Though the Institute of Energy Process Engineering(IEV) in the Research

Centre Juelich(KFA), has recently changed the subject of research from nuclear technology of **high-temperature** gas-cooled reactors(HTGRs) to fuel **cell** technology, there are many common items of research. In particular, the following topics presented in the lectures are of mutual interest: -Methane-steam reforming used at JAERI as HTGR **heat** utilization system and applied at KFA to **internal** reforming in the **high temperature** Solid Oxide Fuel **Cell** (SOFC), -Technology and modeling of **high temperature** electrolysis at JAERI as the **inverse** process of the SOFC developed at KFA, -Flow simulation of branched systems treated at JAERI for the development of **high temperature heat** exchangers and performed at KFA with respect to the SOFC manifold system, -Fundamental aspects of **heat** and mass transfer. The report should help to create a basis of discussing the above mentioned problems and to stimulate the research work at JAERI. (author abst.)

CC YB04040V (621.352.6)

CT laboratory; solid electrolyte; solid fuel **cell**; solar energy; energy storage; catalytic combustion; modeling; chemical property; current-voltage characteristic; computer simulation; methane gas; steam reforming

BT electrolyte; matter; fuel **cell**; chemical **cell**; **battery**; energy resource; resource; natural energy; energy; storage; combustion; operation(processing); property; electrical characteristic; characteristic; computer application; utilization; simulation; combustible gas; reforming; gasification; modification

L18 ANSWER 8 OF 10 COMPENDEX COPYRIGHT 2004 EEI on STN

AN 1996(45):756 COMPENDEX Full-text

TI HITFETs with **current** sensing: low-side **switches** unlimited.

AU Reinmuth, Klaus; Rossle, Christian

SO Siemens Components v 31 n 3 May-Jun 1996.p 18-20
CODEN: SICOD5 ISSN: 9173-1734

PY 1996

DT Journal

TC Application

LA English

AB Used as low-side switches, HITFETs can switch ohmic, inductive and capacitive loads at **battery** potential or at 48 V for industrial applications. These 60 V components are available in the standard TO-220 package or in SMD packages. Their drain-source on resistance $R_{DS(on)}$ ranges from 18 to 100 m Ω . HITFETs are fully protected against: overloads, short circuits, overvoltage, excess temperature, and ESD. Here, shortcircuit protection plays a special role: apart from limitation of the short-circuit current, effective dissipation of the resulting power loss must be ensured at all times; power dissipation depends on the **thermal** conditions and the **internal** reaction time of the component. Short-circuit protection is guaranteed for up to 32 V for the three-pin HITFET, whereas for the five-pin version it is a function of the set current for up to 50 V. In addition to these performance benefits, HITFETs are more cost-effective than electromechanical solutions in applications up to about 5 A.

CC 714.2 Semiconductor Devices and Integrated Circuits; 715 Electronic Equipment, General Purpose and Industrial; 731.3 Specific Variables Control; 701.1 Electricity: Basic Concepts and Phenomena; 942.2 Electric Variables Measurements; 662.4 Automobile and Smaller Vehicle Components

CT *Field effect transistors; Electric resistance; Electric current control; Overvoltage protection; Short circuit currents; MOSFET devices; Resistors; Electric current measurement; Semiconductor switches; Power electronics

ST Low side switches; HITFETs; Overload protection; Over temperature protection; Short circuit protection; Current limitation; **Thermal**

shutdown; Smart power switches; Signal conditioning; Automotive applications

ET V; 48V; is; V is; 60V

L18 ANSWER 9 OF 10 COMPENDEX COPYRIGHT 2004 EEI on STN
AN 1992(12):161095 COMPENDEX DN 9212149818 Full-text
TI Inhomogeneous temperature problems inside a Li/SOC12 **cell**;
homogenization by integrated **heat** pipes.
AU LeFrie, C. (ENSMA); Suleiman, A.; Alexandre, A.
MT 22nd International Conference on Environmental Systems.
ML Seattle, WA, USA
MD 13 Jul 1992-16 Jul 1992
SO SAE Technical Paper Series. Publ by SAE, Warrendale, PA, USA, 921165.p 1-5
CODEN: STPSDN ISSN: 0148-7191
PY 1992
MN 16921
DT Conference Article
TC Theoretical; Experimental; Application
LA English
AB In the present paper, we are going to investigate the influence of the temperature gradient on the electrical capacity of the Lithium/thionyl chloride **cells** and the dependence of **internal heat** generation on the temperature level. Moreover, we will show the influence of temperature gradient between couples on the depth of discharge and so how important is to limit this gradient to prevent discrepancy in couple's voltage and **inversion** phenomenon. First, we present a theoretical study concerning the influence of temperature on the **heat** generation of lithium/thionyl chloride couple. This study, which is based on the thermoneutral potential, was carried out using calorimetry measurement. We also display the evolution of discharge tension and current with temperature. Secondly, we present a real evolution of these parameters and that for a lithium **battery** cooled by an aluminium corset put on a coldplate. A nodal model has been made to simulate **battery** behaviour and different parameter's evolution for a realistic discharge profile. It follows that pure conduction cooling system is not suitable in the case of high discharge currents in the **cell** lithium **cells**. A new cooling concept is proposed to overcome this problem left bracket 1 right bracket . (Author abstract) 6 Refs.
CC 702 Electric Batteries & Fuel Cells; 801 Chemical Analysis & Physical Chemistry; 641 Heat & Thermodynamics; 921 Applied Mathematics
CT *ELECTRIC **BATTERIES**: Lithium; ELECTROCHEMISTRY: Mathematical Models; ELECTRIC **BATTERIES**: Cooling; **HEAT** PIPES
ST **HEAT** GENERATION; THERMONEUTRAL POTENTIAL; DISCHARGE VOLTAGE; INTEGRATED **HEAT** PIPE
ET Li

L18 ANSWER 10 OF 10 DISSABS COPYRIGHT (C) 2004 ProQuest Information and Learning Company; All Rights Reserved on STN
AN 85:25846 DISSABS Order Number: AAR8602188
TI NON-**THERMAL** RADIATION MECHANISMS AND PROCESSES IN SS 433 AND ACTIVE GALACTIC NUCLEI
AU BAND, DAVID LOUIS [PH.D.]
CS HARVARD UNIVERSITY (0084)
SO Dissertation Abstracts International, (1985) Vol. 47, No. 1B, p. 248. Order No.: AAR8602188. 307 pages.
DT Dissertation
FS DAI
LA English

ED Entered STN: 19921118

Last Updated on STN: 19921118

AB Studies of the jet emitting compact binary system SS 433 and the non-**thermal** synchrotron-self-Compton scattering process reveal features of the interaction of compact objects with their environments. The Einstein MPC X-ray observations of SS 433 are best fit by a non-**thermal** power law spectrum where both the intensity and (energy) spectral index varied on a timescale of hours to days. Flares characterized by an intensity increase and a hardening of the spectral index are attributed (within the context of the slaved disk model) to accretion surges that occur at certain orbital phases in a binary with a Roche-lobe filling primary whose spin axis is misaligned with the orbital axis.

The synchrotron-self-Compton methodology in spherical geometries is refined, emphasizing both geometrical and spectral factors for both homogeneous and inhomogeneous **sources**. **Electron** and photon energy distribution cutoffs, as well as the high energy Klein-Nishina scattering cross-section, are considered in the spectral calculation. Physically reasonable variations on the standard model create observable breaks, spectral index changes, and peaks in the observed spectrum.

The spectra from radio quiet active galactic nuclei (such as Seyfert 1 galaxies and radio quiet quasars) can result from a non-**thermal** model with a "broken" power law electron distribution where synchrotron losses cause the distribution to steepen. The canonical source has a turnover at about 10^{12} Hz, and a broken synchrotron power law with a far infrared (energy) spectral index of (alpha) (TURN) .7 and a near infrared spectral index (alpha) (TURN) 1.2. The scattered spectrum with (alpha) (TURN) .7 intersects the steeper synchrotron spectrum in the soft X-ray band. Observable radio emission originates in extended sources and jets outside of the core. Reacceleration is required throughout the source. The flat hard X-ray spectra from Seyferts requires the scattering of optical and ultraviolet **thermal** photons. Finally, the model of expanding sources (perhaps embedded in jets) is extended to include both continuous electron injection and **inverse** Compton X-ray production. Application of this methodology to SS 433 suggests that the radio flares require additional electron injection into the expanding sources in the jets, while the X-ray emission cannot originate in these expanding sources. Analogous to the sources within radio quiet quasars, a self-consistent non-**thermal** source **within** the binary can satisfy observational constraints.

CC 0606 PHYSICS, ASTRONOMY AND ASTROPHYSICS

L23 ANSWER 1 OF 4 PCTFULL COPYRIGHT 2004 Univention on STN

AN 2004097159 PCTFULL ED 20041117 EW 200446 Full-text

TIEN THERMAL PROCESSES FOR SUBSURFACE FORMATIONS

TIFR PROCEDES THERMIQUES POUR FORMATIONS SOUTERRAINES

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 GINESTRA, Jean-Charles, 5207 Mimosa Lane, Richmond, Texas 77469, US [FR, US], for US only;
 HANSEN, Kirk, Samuel, 647 Electra Drive, Houston, Texas 77079, US [US, US], for US only;
 WAGNER, Randolph, Rogers, 14919 Chadbourne Drive, Houston, Texas 77079, US [US, US], for US only;
 HARTMANN, Robin, Adrianus, Volmerlaan 8, 2288, NL-2288-GD Rijswijk, NL [NL, NL], for US only;
 SANZ, Guillermo, Pastor, 6118 Saratoga Springs Lane, Houston, Texas 77041, US [ES, US], for US only;
 FAIRBANKS, Michael, David, 2906 Cambry Corssing Court, Katy, TX 77494, US [US, US], for US only
 AG MEYERTONS, HOOD, KIVLIN, KOWERT & GOETZEL, P.C., Meyertons, Eric, B., P.O. Box 398, Austin, TX 78767-0398, US
 LAF English
 LA English
 DT Patent
 PI WO 2004097159 A2 20041111
 DS W: AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NA NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW
 W-U: AE AL AM AT AZ BG BR BY BZ CN CO CR CZ DE DK EC EE EG ES FI GE HU JP KE KG KP KR KZ LS MD MX MZ NI PH PL PT RU SK SL TJ TR TT UA UG UZ YU
 RW (ARIPO): BW GH GM KE LS MW MZ NA SD SL SZ TZ UG ZM ZW
 RW (EAPO): AM AZ BY KG KZ MD RU TJ TM
 RW (EPO): AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LU MC NL PL PT RO SE SI SK TR
 RW (OAPI): BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
 RW-U (OAPI): BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
 AI WO 2004-US12784 A 20040424
 PRAI US 2003-60/465,279 20030424
 US 2003-60/514,593 20031024
 ABEN A process may include providing heat from one or more heaters to at least a portion of a subsurface formation. Heat may transfer from one or more heaters to a part of a formation. In some embodiments, heat from the one or more heat sources may pyrolyze at least some hydrocarbons in a part of a subsurface formation. Hydrocarbons and/or other products may be produced from a subsurface formation. Certain embodiments describe apparatus, methods, and/or processes used in treating a subsurface or hydrocarbon containing formation.
 ABFR L'invention concerne un procede pouvant consister a fournir de la chaleur a partir d'un ou de plusieurs rechauffeurs vers au moins une partie d'une formation souterraine. La chaleur peut etre transferee a partir d'un ou de

plusieurs rechauffeurs vers une partie d'une formation. Dans certains modes de realisation, la chaleur de ladite ou desdites sources de chaleur peut pyrolyser au moins certains hydrocarbures dans une partie d'une formation souterraine. Des hydrocarbures et/ou autres produits peuvent etre produits a partir d'une formation souterraine. Dans certains modes de realisation, l'invention concerne un appareil, des procedes et/ou des processus utilises pour traiter une formation souterraine ou contenant des hydrocarbures.

L23 ANSWER 2 OF 4 PCTFULL COPYRIGHT 2004 Univentio on STN
 AN 2003062056 PCTFULL ED 20030808 EW 200331 Full-text
 TIEN ICE MODIFICATION, REMOVAL AND PREVENTION PRIORITY
 TIFR MODIFICATION, SUPPRESSION DE GLACE ET PREVENTION CONTRE CELLE-CI
 IN PETRENKO, Victor, 4 Woodland Drive, Lebanon, NH 03766, US [US, US];
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 only
 AG KNOPS, Peter, C., Lathrop & Gage, LC, Suite 2800, 2345 Grand Boulevard,
 Kansas City, MO 64108, US
 LAF English
 LA English
 DT Patent
 PI WO 2003062056 A1 20030731
 DS W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU
 CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN
 IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN
 MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT
 TZ UA UG US UZ VN YU ZA ZW
 RW (ARIPO): GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW
 RW (EAPO): AM AZ BY KG KZ MD RU TJ TM
 RW (EPO): AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
 RW (OAPI): BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
 AI WO 2002-US1858 A 20020122
 PRAI US 2001-60/262,775 20010119
 US 2001-60/263,943 20010124
 US 2001-60/272,747 20010301
 US 2001-60/283,670 20010412
 US 2001-09/872,295 20010601
 US 2001-60/299,693 20010620
 US 2001-09/971,287 20011004
 US 2001-09/970,555 20011004
 US 2001-09/976,210 20011011
 US 2002-09/976,210 20020109
 US 2002-09/976,210 20020111
 ABEN An alternating electric field is applied to ice (530) to generate a resistive
 AC having a frequency greater than 1000 Hz in interfacial ice at interface
 (554).
 A first electrode (510) and a second electrode (514) proximate to the interface

are separated by an electrical insulator (512). An AC power source (520) provides a voltage of about 10 to 500 volts across the electrodes to create the alternating electric field. A portion of the capacitive AC associated with the alternating electric field is present in the interfacial ice as conductivity (resistive) AC, which causes dielectric loss heating in the interfacial ice.

ABFR Un champ électrique alternatif est appliqué à de la glace (530) de manière à produire un courant alternatif résistant présentant une fréquence supérieure à 1000 Hz dans la glace de surface située sur l'interface (554). Une première électrode (510) et une seconde électrode (514), placées à proximité de ladite interface, sont séparées par un isolant électrique (512). Une source de courant alternatif (520) fournit une tension comprise entre 10 et 500 volts à travers l'électrode de façon à créer le champ électrique alternatif. Une partie du courant alternatif capacitatif associée avec ledit champ électrique alternatif est présente dans la glace de surface en tant que courant alternatif (résistant) de conductivité, qui entraîne un chauffage par perte diélectrique dans la glace de surface.

L23 ANSWER 3 OF 4 EUROPATFULL COPYRIGHT 2004 WILA on STN

PATENT APPLICATION - PATENTANMELDUNG - DEMANDE DE BREVET

AN 1081739 EUROPATFULL UP 20020218 EW 200110 FS OS STA R Full-text
 TIEN IMAGE FORMING DEVICE.
 TIDE BILDERZEUGUNGSVORRICHTUNG.
 TIFR DISPOSITIF DE FORMATION D'IMAGES.
 IN MIYAZAKI, Toshihiko, 836-44, Tanaka, Isehara-shi, Kanagawa 259-1142, JP;
 ONO, Takeo, 26-15, Yokoyama 3-chome, Sagamihara-shi, Kanagawa 229-1122, JP;
 MITSUTAKE, Hideaki, 37-3-303, Katsuradai 2-chome, Aoba-ku, Yokohama-shi, Kanagawa 227-0034, JP;
 HASEGAWA, Mitsutoshi, 1-9-202, Namiki 2-chome, Kanazawa-ku, Yokohama-shi, Kanagawa 236-0005, JP;
 YAMAGUCHI, Eiji, 37-1-510, Komatsubara 1-chome, Zama-shi, Kanagawa 228-0002, JP;
 YAMADA, Shuji, 6-60-304, Tsumadahigashi 1-chome, Atsugi-shi, Kanagawa 243-0813, JP;
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 PA CANON KABUSHIKI KAISHA, 30-2, Shimomaruko 3-chome, Ohta-ku Tokyo 146-8501, JP
 PAN 542362
 AG Beresford, Keith Denis Lewis et al., 2-5 Warwick Court High Holborn, London WC1R 5DJ, GB
 AGN 28274
 OS BEPA2001018 EP 1081739 A1 0290
 SO Wila-EPZ-2001-H10-T2b
 DT Patent
 LA Anmeldung in Japanisch; Veroeffentlichung in Englisch; Verfahren in Englisch
 DS R AT; R BE; R CH; R CY; R DE; R DK; R ES; R FI; R FR; R GB; R GR; R IE; R IT; R LI; R LU; R MC; R NL; R PT; R SE
 PIT EPA1 EUROPAEISCHE PATENTANMELDUNG (Internationale Anmeldung)
 PI EP 1081739 A1 20010307

OD 20010307
 AI EP 2000-906728 20000306
 PRAI JP 1999-103035 19990305
 JP 1999-98232 19990405
 RLI WO 00-JP1347 000306 INTAKZ
 WO 0054307 000914 INTPNR
 ABEN An image formation apparatus is disclosed which includes, within an enclosure configured by a pair of substrates placed face to face and an external frame placed between the substrates, an electron source placed on one of the pair of substrates, an image formation material placed on the other substrate, and spacers placed between the substrates, characterized in that the spacers and the external frame is conductive and device is provided for electrically connecting the spacers and the external frame so that the equipotential surfaces between the spacers and the external frame are quasi-parallel when driven. <image>

L23 ANSWER 4 OF 4 EUROPATFULL COPYRIGHT 2004 WILA on STN

PATENT APPLICATION - PATENTANMELDUNG - DEMANDE DE BREVET

AN 1077443 EUROPATFULL UP 20020218 EW 200108 FS OS STA R Full-text
 TIEN IMAGE FORMING DEVICE.
 TIDE BILD-FORMIERUNGS-VORRICHTUNG.
 TIFR DISPOSITIF DE FORMATION D'IMAGES.
 IN MIYAZAKI, Toshihiko, 836-44, Tanaka, Isehara-shi, Kanagawa 259-1142, JP;
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 ONO, Takeo, 26-15, Yokoyama 3-chome, Sagamihara-shi, Kanagawa 229-1122, JP;
 MITSUTAKE, Hideaki, 37-3-303, Katsuradai 2-chome, Aoba-ku, Yokohama-shi, Kanagawa 227-0034, JP;
 HASEGAWA, Mitsutoshi, 1-9-202, Namiki 2-chome, Kanazawa-ku, Yokohama-shi, Kanagawa 236-0005, JP;
 YAMAGUCHI, Eiji, 37-1-510, Komatsubara 1-chome, Zama-shi, Kanagawa 228-0002, JP;
 YAMADA, Shuji, 6-60-304, Tsumadahigashi 1-chome, Atsugi-shi, Kanagawa 243-0813, JP;
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 PA CANON KABUSHIKI KAISHA, 30-2, Shimomaruko 3-chome, Ohta-ku Tokyo 146-8501, JP
 PAN 542362
 AG Beresford, Keith Denis Lewis et al., 2-5 Warwick Court High Holborn, London WC1R 5DJ, GB
 AGN 28274
 OS BEPA2001014 EP 1077443 A1 0296
 SO Wila-EPZ-2001-H08-T2a
 DT Patent
 LA Anmeldung in Japanisch; Veroeffentlichung in Englisch; Verfahren in Englisch
 DS R AT; R BE; R CH; R CY; R DE; R DK; R ES; R FI; R FR; R GB; R GR; R IE; R IT; R LI; R LU; R MC; R NL; R PT; R SE
 PIT EPAL EUROPAEISCHE PATENTANMELDUNG (Internationale Anmeldung)

PI EP 1077443 AI 20010221
OD 20010221
AI EP 2000-906727 20000306
PRAI JP 1999-103035 19990305
JP 1999-98239 19990405
RLI WO 00-JP1346 000306 INTAKZ
WO 0054246 000914 INTPNR

ABEN An electron beam display comprising a first substrate (1011) having an electron emitting device (1012); a second substrate having a substrate having a transparent substrate (1017), a phosphor layer (1018) provided on the transparent substrate, a mask member for demarcating the phosphor layer into light-emitting regions, an accelerating electrode (1019) for accelerating electrons emitted from the electron emitting device, and an antistatic film (1022); a vacuum enclosure constituted of a member including the first and second substrates spaced from each other and having therein a spacer member (1020) for maintaining the spacing and a getter; and a drive circuit including a scanning line device circuit for sequentially applying a scanning signal to scanning lines (1014) and a control line drive circuit for applying a modulation signal corresponding to image information to all the control lines (1013) at once synchronously with the scanning lines. <image>